

# ***WASHINGTON ACTION FOR SAFE WATER***

September 13, 2010

<http://washingtonsafewater.com/bd-of-health/rulemaking-lead-9-13-10>

Washington State Board of Health  
Craig McLaughlin, Executive Director  
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Olympia WA 98504-7990  
Sent by fax to: 360-236-4088  
Sent by email to: [wsboh@doh.wa.gov](mailto:wsboh@doh.wa.gov)

Dear Mr. McLaughlin,

Please submit this proposal for rule making to the Washington Board of Health. The proposal rule deals with lead in drinking water.

To make it easier to follow links in this letter, supporting documents are available online. We are not submitting copies of supporting documents in hard copies. For access to supporting documents, read this letter and follow the links at: <http://washingtonsafewater.com/bd-of-health/rulemaking-lead-9-13-10>.

To download a Word version of this letter go here:

<http://washingtonsafewater.com/wp-content/uploads/rulemaking-lead-9-13-10-doc>.

RCW 43.20.050 empowers the Board of Health as follows:

In order to protect public health, the state board of health shall:

(a) Adopt rules for group A public water systems, as defined in RCW 70.119A.020, necessary to assure safe and reliable public drinking water and to protect the public health. Such rules shall establish requirements regarding:

...  
(ii) Drinking water quality standards, monitoring requirements, and laboratory certification requirements....

Federal law mandates that water districts give lead notices. A water district, as

owner or operator of a public water system ... shall identify and provide notice to persons that may be affected by lead contamination of their drinking water where such contamination results from ... lead content in the construction materials of the public water distribution system [or] corrosivity of the water supply

sufficient to cause leaching of lead. ... Notice under this paragraph shall be provided notwithstanding the absence of a violation of any national drinking water standard.<sup>1</sup>

The Board of Health has responsibility to make rules pertaining to protecting Washington citizens, particularly children from lead.

The primary focus of current efforts by the Board of Health to protect citizens from lead is avoiding lead in old paint,<sup>2</sup> although the Board of Health in its literature also mentions lead in brass plumbing fixtures, solder, and batteries. The "Lead Warning" card<sup>3</sup> distributed by the Washington Department of Health focuses almost entirely on lead in paint. The section of "A Healthy Home" brochure<sup>4</sup> published by the Department of Health and which deals with lead focuses entirely on lead paint. Likewise, EPA efforts<sup>5</sup> to reduce exposure to lead focus on lead in paint.

The health issue is this: There is lead in drinking water. Chemicals are being added which contain lead. Chemicals are being added to drinking water which bind with lead and facilitate its uptake and retention by the human body. Washington is failing to notify citizens of these lead issues.

The EPA classifies lead<sup>6</sup> as a "probable human carcinogen" and adds:

Health effects associated with exposure to inorganic lead and compounds include, but are not limited to, neurotoxicity, developmental delays, hypertension, impaired hearing acuity, impaired hemoglobin synthesis, and male reproductive impairment. Importantly, many of lead's health effects may occur without overt signs of toxicity. Lead has particularly significant effects in children, well before the usual term of chronic exposure

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<sup>1</sup> 42 USC 300g-1(b)(11)

<sup>2</sup> Washington Department of Ecology, September, 2009, "Reducing Toxic Threats," [http://www.sboh.wa.gov/Meetings/2010/06-09/docs/Tab14d-Lead\\_Factsheet\\_StateChemicalActionPlan.pdf](http://www.sboh.wa.gov/Meetings/2010/06-09/docs/Tab14d-Lead_Factsheet_StateChemicalActionPlan.pdf).

<sup>3</sup> Washington Department of Health, DOH Pub 334-141, December, 2007, "Lead Warning," [http://www.sboh.wa.gov/Meetings/2010/06-09/docs/Tab14f-Lead\\_Card\\_Warning.pdf](http://www.sboh.wa.gov/Meetings/2010/06-09/docs/Tab14f-Lead_Card_Warning.pdf).

<sup>4</sup> Washington Department of Health, DOH Pub 300-010, September, 2009, "A Healthy Home," [http://www.sboh.wa.gov/Meetings/2010/06-09/docs/Tab14g-Lead\\_Brochure\\_HealthyHomes.pdf](http://www.sboh.wa.gov/Meetings/2010/06-09/docs/Tab14g-Lead_Brochure_HealthyHomes.pdf).

<sup>5</sup> Lead Lines: A Newsletter for Certified Lead Remediation Workers, Vol. 1, Issue, 1, April 2008, "Summary of EPA's Renovation, Repair and Painting Rule," [http://www.sboh.wa.gov/Meetings/2010/06-09/docs/Tab14e-Lead\\_EPAREnovationRuleSum.pdf](http://www.sboh.wa.gov/Meetings/2010/06-09/docs/Tab14e-Lead_EPAREnovationRuleSum.pdf).

<sup>6</sup> EPA, "Lead and compounds (inorganic) (CASRN 7439-92-1)" <http://www.epa.gov/iris/subst/0277.htm>.

can take place. Children under 6 years old have a high risk of exposure because of their more frequent hand-to-mouth behavior

There has long been lead in almost all brass water pipes and pipe fittings<sup>7</sup> and in the solder used to solder brass and copper pipe. Lead has long been added to brass to serve as a “flux,” that is to make metals in general melt at a lower temperature.<sup>8</sup>

In 1977 we made lead based paint illegal.<sup>9</sup> In 1986 we made lead based inks illegal.<sup>10</sup> Between 1976 and 1986 we phased out tetraethyl lead.<sup>11</sup> California has banned lead bullets<sup>12</sup> in areas where condors forage.

Newer water mains are lead free. However, many older pipes are exception is iron pipes,<sup>13</sup> generally soldered together with lead solder. Iron water mains are common in many cities.<sup>14</sup>

Even if there is no lead in water mains, things change when water gets to homes and businesses, where water encounters brass plumbing and fittings which contain lead, and copper pipe which are soldered with lead solder. Until recently, it was standard procedure to solder copper pipes together with solder containing lead.<sup>15</sup>

In 1986 as part of the Safe Drinking Water Act,<sup>16</sup> the EPA required that all pipes and fittings that carry water be “lead free.” The term “lead free” allowed water pipes and fittings to contain up to 8.0% lead and allowed solder<sup>17</sup> for use in plumbing to contain up to 0.2% lead, a standard which Washington follows.<sup>18</sup> Before 1986 water pipes were sometimes up

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<sup>7</sup> Wikipedia, “Brass,” <http://en.wikipedia.org/wiki/Brass>.

<sup>8</sup> DKL, “FACT AND FICTION IN LEAD FREE SOLDERING,” <http://www.dklmetals.co.uk/PDF%20Files/Factorfiction.pdf>.

<sup>9</sup> Wikipedia, “Lead Paint,” [http://en.wikipedia.org/wiki/Lead\\_paint](http://en.wikipedia.org/wiki/Lead_paint).

<sup>10</sup> Shopfloor, “Tag: Lead-Based Ink,” <http://www.shopfloor.org/tag/lead-based-ink/>.

<sup>11</sup> Wikipedia, “Tetraethyllead,” <http://en.wikipedia.org/wiki/Tetraethyllead>.

<sup>12</sup> California Bill Analysis, “California Condors: Non-lead Ammunition,” April 10, 2007, [http://info.sen.ca.gov/pub/07-08/bill/asm/ab\\_0801-0850/ab\\_821\\_cfa\\_20070409\\_160734\\_asm\\_comm.html](http://info.sen.ca.gov/pub/07-08/bill/asm/ab_0801-0850/ab_821_cfa_20070409_160734_asm_comm.html).

<sup>13</sup> Plumbing-Basics, “Cast Iron Pipes for Plumbing,” <http://www.plumbing-basics.com/pipes/pipes-cast-iron.htm>.

<sup>14</sup> ACIPCO International, “Cast Iron Pipe through the Ages,” <http://www.acipco.com/international/pipeandfittings/ductileiron/history.cfm>.

<sup>15</sup> Wikipedia, “Soldering,” <http://en.wikipedia.org/wiki/Soldering>.

<sup>16</sup> 42 USC 300g-1(b)(11), [http://www.law.cornell.edu/uscode/42/usc\\_sec\\_42\\_00000300---g006-.html](http://www.law.cornell.edu/uscode/42/usc_sec_42_00000300---g006-.html).

<sup>17</sup> Wikipedia, “Soldering,” <http://en.wikipedia.org/wiki/Soldering>.

<sup>18</sup> WAC 246-290-220, <http://apps.leg.wa.gov/wac/default.aspx?cite=246-290-220>.

to 30% lead. This means that we should carefully check lead<sup>19</sup> in water in old buildings, including old schools.

In 2010 California limited lead content<sup>20</sup> in brass pipes and fittings to a maximum of 0.25%, and in solder to 0.20%.<sup>21</sup> It is unfortunate that the EPA did not do the same back in 1986. Many thousands have been harmed<sup>22</sup> in the last 24 years. We should hope that the EPA will follow California's lead and do the same. We are requesting that the Board of Health implement rule making which follows the California rule, as we will spell out below. Note, however, that limiting lead in new construction will not remove the already existing lead in plumbing tens of thousands of homes, schools, and businesses.

In 2004 the Seattle Post-Intelligencer reported that lead was showing up in water fountains in old Seattle schools, at levels up to 1,600 ppb,<sup>23</sup> far above the EPA legally enforceable maximum contaminant level<sup>24</sup> (MCL) in effect at that time, which was 20 ppb. The MCL was recently reduced to 15 ppb.<sup>25</sup> More important is the recommended maximum contaminant level goal<sup>26</sup> (MCLG), which is zero. Lead is a carcinogen, so we should not do anything that adds lead to our water, causes lead to leach out of plumbing, or increases lead uptake or retention by the body.

Lead in pipes will often stay put relatively well and not dissolve into drinking water, particularly hard water which contains a lot of calcium carbonate, which binds with lead.

A problem arises when silicofluorides (SiFs) are added to water. SiFs dissolve lead and bind to lead<sup>27</sup> in such a way that lead which might otherwise pass through the body is absorbed.

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<sup>19</sup> Seattle Public Utilities, "Lead," [http://www.seattle.gov/util/Services/Water/Water\\_Quality/LEAD\\_200312011625223.asp](http://www.seattle.gov/util/Services/Water/Water_Quality/LEAD_200312011625223.asp).

<sup>20</sup> NSF, "Low Lead Plumbing Products Guide," [http://www.nsf.org/business/mechanical\\_plumbing/annexg.asp?program=MechanicalPluSysCom](http://www.nsf.org/business/mechanical_plumbing/annexg.asp?program=MechanicalPluSysCom).

<sup>21</sup> California Senate Bill AB1953, "Lead Plumbing," [http://info.sen.ca.gov/pub/05-06/bill/asm/ab\\_1951-2000/ab\\_1953\\_cfa\\_20060818\\_134053\\_sen\\_floor.html](http://info.sen.ca.gov/pub/05-06/bill/asm/ab_1951-2000/ab_1953_cfa_20060818_134053_sen_floor.html).

<sup>22</sup> Roger Masters, "Silicofluorides and Higher Blood Lead: A National Problem that Particularly Harms Blacks," November 15, 2001, <http://fluoride-class-action.com/wp-content/uploads/Masters-Coplan-Silicofluorides-and-higher-blood-lead-sif-PbinBlacks14-2001.doc>.

<sup>23</sup> Seattle Post-Intelligencer, "Lead-tainted Water in Seattle Schools Stuns Parents," July 2, 2004, [http://www.seattlepi.com/health/180495\\_leadwater02.html](http://www.seattlepi.com/health/180495_leadwater02.html).

<sup>24</sup> Wikipedia, "Maximum Contaminant Level," [http://en.wikipedia.org/wiki/Maximum\\_contaminant\\_level](http://en.wikipedia.org/wiki/Maximum_contaminant_level).

<sup>25</sup> EPA, "Drinking Water Contaminants," <http://water.epa.gov/drink/contaminants/index.cfm>.

<sup>26</sup> Wikipedia, "Safe Drinking Water Act," [http://en.wikipedia.org/wiki/Safe\\_Drinking\\_Water\\_Act](http://en.wikipedia.org/wiki/Safe_Drinking_Water_Act).

<sup>27</sup> Dartmouth News, "Dartmouth researcher Warns of Chemicals Added to Drinking Water," March 15, 2001, <http://www.dartmouth.edu/~news/releases/2001/mar01/flouride.html>.

This problem is more serious in cities which have soft water, that is water which is low in dissolved calcium and other minerals. Even the CDC admits that soft water is more prone<sup>28</sup> to be acidic and leach more lead because there is so little dissolved minerals in soft water to bind with the fluoride and reduce acidity. Thus, fluoride is freer to bind with lead in soft water. Seattle's snow melt water is considered very soft.

Fluoride is the most acidic and electron negative of all elements. Fluoride aggressively seeks out lead and dissolves it, especially in acidic, soft water.

There is a custom of using pipes for electrical grounding. Many older houses are still grounded through water pipes. This accelerates lead corrosion and increases lead in drinking water.<sup>29</sup>

Lead is commonly used in constructing "sacrificial" anodes to prevent corrosion. Research should be done in to whether anodes in electric hot water heaters contain lead.

Further, silicofluorides attack PVC pipe,<sup>30</sup> causing release of ammonia, which combines with chlorine to form chloramine, which is more aggressive than chlorine in dissolving lead in brass pipes, fittings, and solder. Seattle, for example, uses chlorine instead of chloramine, and we hope it will not follow the current trend of switching from chlorine to chloramine as a disinfectant.

Take a look at what the scholars have to say about the subject. In 2000 Masters, Coplan, and others published an article in NeuroToxicology,<sup>31</sup> a peer reviewed journal.<sup>32</sup> This article was expanded on in a 2001 article<sup>33</sup>

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<sup>28</sup> CDC, "Fluoridation of Drinking Water and Corrosion of Pipes in Distribution Systems," August 24, 2009, [http://www.cdc.gov/print.do?url=http%3A%2F%2Fwww.cdc.gov%2Ffluoridation%2Ffact\\_sheets%2Fengineering%2Fcorrosion.htm](http://www.cdc.gov/print.do?url=http%3A%2F%2Fwww.cdc.gov%2Ffluoridation%2Ffact_sheets%2Fengineering%2Fcorrosion.htm).

<sup>29</sup> Wikipedia, "Brass," <http://en.wikipedia.org/wiki/Brass>.

<sup>30</sup> Santa Clara Valley Signal, "Pipes May Leak Lead," August 29, 2009, <http://www.the-signal.com/archives/17365/>.

<sup>31</sup> Masters, Coplan, et al., NeuroToxicology, 2000 Dec;21(6):1091-100, "Association of silicofluoride treated water with elevated blood lead," <http://www.ncbi.nlm.nih.gov/pubmed/11233755?dopt=Abstract>.

<sup>32</sup> Elsevier, "NeuroToxicology,"

[http://www.elsevier.com/wps/find/journaldescription.cws\\_home/621355/description#description](http://www.elsevier.com/wps/find/journaldescription.cws_home/621355/description#description).

<sup>33</sup> Dartmouth University, June 17, 2001, "Silicofluorides & Higher Blood Lead: Statement from Dr. Roger Masters," <http://www.fluoridealert.org/sf-masters.htm>.

and summarized in Dartmouth News.<sup>34</sup> The article in Dartmouth News concludes that there is

evidence that public drinking water treated with sodium silicofluoride or fluosilicic acid, known as silicofluorides (SiFs), is linked to higher uptake of lead in children.

Sodium fluoride, first added to public drinking water in 1945, is now used in less than 10% of fluoridation systems nationwide.... Instead, [silicofluorides] are now used to treat drinking water delivered to 140 million people [including Seattle]. While sodium fluoride was tested on animals and approved for human consumption, the same cannot be said for [silicofluorides].

Masters and ... Coplan ... studied the blood lead levels in over 400,000 children in three different samples. In each case, they found a significant link between [silicofluoride]-treated water and elevated blood lead levels. [Masters said:] 'We should stop using silicofluorides in our public water supply until we know what they do.' ... The researchers found that the greatest likelihood of children having elevated blood lead levels occurs when they are exposed both to known risk factors, such as old house paint and lead in soil or water, and to [silicofluoride]-treated drinking water. [Masters said:] '[O]ur preliminary findings show correlations between SiF use and more behavior problems due to known effects of lead on brain chemistry.' Also requiring further examination is German research that shows [silicofluorides] inhibit cholinesterase, an enzyme that plays an important role in regulating neurotransmitters. [Masters said:] 'If [silicofluorides] are cholinesterase inhibitors, this means that [silicofluorides] have effects like the chemical agents linked to Gulf War Syndrome, chronic fatigue syndrome and other puzzling conditions that plague millions of Americans....' [Masters said:] '[T]his may well be the worst environmental poison since leaded gasoline.'

Masters added more detail in a letter he wrote June 17, 2001.<sup>35</sup>

In 2007 Masters, Coplan, and others published another article in NeuroToxicology,<sup>36</sup> in which they concluded:<sup>37</sup>

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<sup>34</sup> Dartmouth News, "Dartmouth researcher Warns of Chemicals Added to Drinking Water," March 15, 2001, <http://www.dartmouth.edu/~news/releases/2001/mar01/flouride.html>.

<sup>35</sup> Roger D. Masters, "**Silicofluorides and Higher Blood Lead**," **June 17, 2001**, <http://www.floridealert.org/sf-masters.htm>.

Silicofluorides ... are used to fluoridate over 90% of US fluoridated municipal water supplies [including Seattle's]. Living in communities with silicofluoride treated water... is associated with two neurotoxic effects:

- (1) Prevalence of children with elevated blood lead ... is about double that in non-fluoridated communities .... [silicofluoride treated water] is associated with serious corrosion of lead-bearing brass plumbing, producing elevated water lead ... at the faucet. New data refute the long-prevailing belief that [lead in water] contributes little to children's blood lead.... [I]t is likely to contribute 50% or more.
- (2) [Silicofluoride treated water] has been shown to interfere with cholinergic function. ... [Silicofluoride treated water] is a more powerful inhibitor of acetylcholinesterase than [water fluoridated with sodium fluoride, which was used when fluoridation first began in the 1950s].

There is another problem. Silicofluorides not only attach to and deliver lead. They actually contain lead. Silicofluorides come from super-phosphate fertilizer plants in Florida, Louisiana, and increasingly from China. To make super-phosphate fertilizer, processors cook rock phosphate with sulfuric acid. Sulfuric acid contains lead because the sulfuric acid is produced in gigantic lead pots, and part of the lead remains in the sulfuric acid, as NSF International<sup>38</sup> admits.

In making your analysis, remember that lead is a carcinogen and neurotoxin and that the MCLG,<sup>39</sup> maximum contaminant level goal for lead is zero. That means none at all should be added to drinking water.

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<sup>36</sup> Coplan, Masters, et al., "Confirmation of and explanations for elevated blood lead and other disorders in children exposed to water disinfection and fluoridation chemicals," NeuroToxicology, Volume 28, Issue 5, September 2007, Pages 1032-1042,

[http://www.sciencedirect.com/science?\\_ob=ArticleURL&\\_udi=B6W81-4N5CX5D-1&\\_user=10&\\_coverDate=09%2F30%2F2007&\\_rdoc=1&\\_fmt=high&\\_orig=browse&\\_sort=d&\\_view=c&\\_acct=C000050221&\\_version=1&\\_urlVersion=0&\\_userid=10&md5=30f0dafa13d27af44fac90b8a8d39b82](http://www.sciencedirect.com/science?_ob=ArticleURL&_udi=B6W81-4N5CX5D-1&_user=10&_coverDate=09%2F30%2F2007&_rdoc=1&_fmt=high&_orig=browse&_sort=d&_view=c&_acct=C000050221&_version=1&_urlVersion=0&_userid=10&md5=30f0dafa13d27af44fac90b8a8d39b82).

<sup>37</sup> Ibid., complete article, <http://fluoride-class-action.com/wp-content/uploads/coplan-masters-confirmation-of-and-explanations-for-elevated-blood-lead-and-other-disorders-in-children-exposed-to-water-disinfection-and-fluoride-chemicals-neurotoxicology-28-2007-1032.pdf>.

<sup>38</sup> NSF Fact Sheet on Fluoridation Chemicals, 2008, [http://www.nsf.org/business/water\\_distribution/pdf/NSF\\_Fact\\_Sheet.pdf](http://www.nsf.org/business/water_distribution/pdf/NSF_Fact_Sheet.pdf).

<sup>39</sup> EPA, "Drinking Water Contaminants," <http://water.epa.gov/drink/contaminants/index.cfm#1>.

A mother's placental barrier does not prevent the passage of lead or fluoride to her fetus.<sup>40</sup> Babies are being born in Seattle with reduced IQ as a direct result our "just a little lead" in our drinking water policy.

We quote<sup>41</sup> from Fluoride and Lead by Frances Frech:

Let us tell you a tale of two cities--Tacoma, Washington, and Thurmont, Maryland. Both of them saw significant decline in [blood] lead levels only six months after fluoridation was stopped. (In Tacoma, that was due to equipment problems, in Thurmont, it was a temporary ban by the city council.) Tacoma registered a drop of nearly 50% ...; in Thurmont it was 78%. To the best of our knowledge, no other explanations were offered. In Thurmont the ban is now permanent."

Unfortunately, Tacoma returned to fluoridating its drinking water and a battle continues over whether to reverse this policy.

Super-phosphate fertilizer is used to grow corn, soybeans, wheat, and other industrial food crops. As sulfuric acid is mixed with rock phosphate, clouds of fluoride-rich<sup>42</sup> vapor go up the stacks. Before EPA intervention in the 1970s, the toxic smoke poisoned plants, animals, and people for miles around. The EPA required fertilizer plants to begin using wet scrubbers to filter out the fluoride along with the lead, arsenic, and many other contaminants. The silicofluorides are the unfiltered and unprocessed scrubber liquor from the fertilizer production process. Silicofluoride scrubber liquor goes directly into tanker trucks and is delivered to Seattle in tanker trucks to the headwaters of our rivers where it is poured into our drinking water.

The greatest irony of all this is that the toxic smoke that was illegal as air pollution came to be regarded as legal as water pollution.

Washington water systems are not only adding chemicals which leach lead from pipes and not only facilitate lead uptake but which also contain lead.

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<sup>40</sup> Newsweek, "Lead and Your Kids," July 15, 1991, <http://www.newsweek.com/1991/07/14/lead-and-your-kids.html>.

<sup>41</sup> Frances Frech, "Fluoride and Lead," <http://sonic.net/kryptox/environ/lead/lead.htm>.

<sup>42</sup> H.F.J. Denzinger, H.J. Konig and G.E.W. Kruger, "**Fluorine recovery in the fertilizer industry - a review**," Phosphorous & Potassium, September/October 1979, No. 103, pp. 33-39, <http://www.fluoridealert.org/phosphate/denzinger.htm>.



The EPA has granted primacy to the state of Washington to implement the SDWA. See 40 CFR 42.10. In each state there is a lead agency which is empowered to administer the SDWA, and in Washington that agency is the Department of Health. RCW 70.119A.080, RCW 43.21A.445. In RCW 43.21A.445 several Washington agencies led by the Department of Health are "... authorized to participate fully in and are empowered to administer ..." the SDWA.

Because the SDWA requires that state "... drinking water regulations" be "no less stringent than the national primary drinking water regulations,"<sup>43</sup> Washington regulations likewise must be so limited. Therefore, the Department of Health must see to it that water districts disseminate notice regarding lead which the Safe Drinking Water Act requires water districts to give.<sup>44</sup> This is what the SDWA says regarding lead notice:

Public notice requirements

(A) In general

Each owner or operator of a public water system shall identify and provide notice to persons that may be affected by lead contamination of their drinking water where such contamination results from either or both of the following:

- (i) The lead content in the construction materials of the public water distribution system.
- (ii) Corrosivity of the water supply sufficient to cause leaching of lead.

The notice shall be provided in such manner and form as may be reasonably required by the Administrator. Notice under this paragraph shall be provided notwithstanding the absence of a violation of any national drinking water standard.

(B) Contents of notice

Notice under this paragraph shall provide a clear and readily understandable explanation of—

- (i) the potential sources of lead in the drinking water,
- (ii) potential adverse health effects,
- (iii) reasonably available methods of mitigating known or potential lead content in drinking water,

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<sup>43</sup> 40 C.F.R. § 142.10 Requirements for a determination of primary enforcement responsibility, <http://law.justia.com/us/cfr/title40/40-22.0.1.1.4.2.31.1.html>.

<sup>44</sup> 42 USC 300g-1(b)(11)

- (iv) any steps the system is taking to mitigate lead content in drinking water, and
- (v) the necessity for seeking alternative water supplies, if any.

The law is very clear on this point: Water systems must give an honest notice to water drinkers regarding lead, and the Department of Health as the lead agency in enforcement of the SDWA<sup>45</sup> as set forth in RCW 70.119A.080 must pass and enforce a regulation requiring that water districts give such notice.

Said notice should include the following warning:

In water districts which choose to fluoridate using silicofluorides, those who drink the water should be aware that silicofluorides contain lead, that silicofluorides dissolve lead in brass pipe, brass fittings, the solder used to solder together brass and copper pipe, and the lead solder used to solder cast iron water main pipes. Those who wish to avoid consuming lead and those who wish to avoid having their children suffer brain impairment should not allow them to drink tap water fluoridated with silicofluorides.

Further, because silicofluorides contain more lead than sodium fluoride, because silicofluorides cause more lead to be leached from brass pipe and fittings, from lead solder used to solder copper pipe and cast iron water mains, silicofluorides should be disallowed as fluoridation materials and only sodium fluoride should be allowed.

The following three sections should be added to WAC 246-290-460:

1. Public notice requirements
  - (A) In general  
Each owner or operator of a public water system shall identify and provide notice to persons that may be affected by lead contamination of their drinking water where such contamination results from either or both of the following:
    - (i) The lead content in the construction materials of the public water distribution system.
    - (ii) Corrosivity of the water supply sufficient to cause leaching of lead.

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<sup>45</sup> RCW 70.119A.080, <http://apps.leg.wa.gov/rcw/default.aspx?cite=70.119A.080>

The notice shall be provided in such manner and form as may be reasonably required by the Administrator. Notice under this paragraph shall be provided notwithstanding the absence of a violation of any national drinking water standard.

(B) Contents of notice

Notice under this paragraph shall provide a clear and readily understandable explanation of—

- (i) the potential sources of lead in the drinking water,
- (ii) potential adverse health effects,
- (iii) reasonably available methods of mitigating known or potential lead content in drinking water,
- (iv) any steps the system is taking to mitigate lead content in drinking water, and
- (v) the necessity for seeking alternative water supplies, if any.

2. Water districts which practice water fluoridation and which use silicofluorides as fluoridation materials shall give the following written notice in each water bill sent to water users:

Those who drink the water should be aware that water in the \_\_\_\_\_ [name the water districts] is fluoridated with silicofluorides, that silicofluorides contain lead, that silicofluorides leach lead from brass pipe, from brass fittings, from the solder used to solder together brass and copper pipe, and from the lead solder used to solder cast iron water main pipes. Those who wish to avoid consuming lead and who wish to avoid having their children consume lead should not drink tap water or use it to cook food and instead to use a source of water known not to contain lead. Lead is known to cause brain damage.

3. Further, because silicofluorides contain more lead than sodium fluoride, because silicofluorides cause more lead to be leached from brass pipe and fittings, from lead solder

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used to solder copper pipe and cast iron water mains,  
silicofluorides should be disallowed as fluoridation materials.

In closing, we want to make it clear that Washington Action for Safe Water does not support any kind of water fluoridation. All fluoridation is highly unwise for many reasons. However, do silicofluorides do appear to be more harmful than sodium fluoride and to contain, leach, and facilitate lead uptake to a greater degree than sodium fluoride. Further, laws regarding lead notice are not being followed. Thus, this rule making proposal regarding lead is presented as a separate issue.

Sincerely,

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